



# STATE OF NEVADA

Department of Conservation & Natural Resources

Jim Gibbons, Governor

Allen Biaggi, Director

DIVISION OF ENVIRONMENTAL PROTECTION

Leo M. Drozdoff, P.E., Administrator

Dear Homeowner:

The following information has been prepared by the Nevada Division of Environmental Protection (NDEP), in concert with the Nevada State Health Laboratory. Recent concern regarding information related to Polonium-210 has prompted questions related to residential well analysis for radioactive particles or elements. Our intent is to provide you with guidance on sampling your residential well, as well as information and contacts for your future use.

At this time, the NDEP is recommending that concerned homeowners start with a gross alpha analysis. Polonium-210 is an “alpha-emitter” and the gross alpha analysis is an economical first step toward better understanding the quality of your drinking water. The federal standard for gross alpha in public water supplies is 15 pCi/l (picocuries per liter). If your result is greater than this drinking water maximum contaminant level (MCL), then please contact the NDEP Bureau of Safe Drinking Water for further information and possible additional sampling instructions. Many people will benefit from this approach because the Nevada State Health Lab charges \$46.00 for the gross alpha analysis, versus a Polonium-210 analysis that could cost \$100-\$150, plus shipping costs.

While Polonium-210 has been identified in some local wells, it is one of several “alpha-emitters” that make up the total value for gross alpha. Under the regulations for public water supplies, a gross alpha lab result greater than 15 pCi/l prompts a second analysis for another common “alpha-emitter”, specifically, Uranium. The purpose of this test is to evaluate how much of the gross alpha is actually coming from naturally occurring Uranium. It is best if both of these analyses happen from the same original sample. At the Nevada State Health Lab, the cost for a Uranium analysis is an additional \$14.00. If your gross alpha result is greater than 15 pCi/l, the NDEP recommends this second analysis. To streamline this process and possibly save you the cost of re-doing the gross alpha analysis, your pre-authorization is sought by the Nevada State Health Lab. ***If you agree to this process, please sign where indicated on page two and return it with your sample bottles.***

The Churchill County office of the UNR Cooperative Extension has volunteered support to your community by providing a common point to pick up and drop off sample bottles. The following pages contain sampling instructions from the Nevada State Health Lab and other information we hope you will find useful.

If you have any questions or concerns, please do not hesitate to call the NDEP’s Bureau of Safe Drinking Water’s main number at 775-687-9521. Your call will be directed to one of several staff who can assist you.

If you have any questions about sampling your well or the lab analysis process, please do not hesitate to contact the Nevada State Health Lab, Stephanie Van Hooser, at 775-688-1335.



## **QUESTIONS AND ANSWERS**

### **Where are sample bottles available?**

Sample bottles can be picked up from the:

Churchill County Extension Educator  
UNR Cooperative Extension  
111 Sheckler Road  
Fallon, NV 89406

OR:

Nevada State Health Lab  
1660 North Virginia Street  
Reno, NV 89503

OR:

Bottles can be sent directly to you from the NV State Health Lab by calling 775-688-1335, ext 261

### **What could interfere with my lab result?**

Reasons for potential rejection include, but are not limited to:

Improperly preserved samples, i.e. wrong pH, wrong or missing preservative, etc.  
Leaking sample bottles  
Incomplete/missing/or incorrectly filled out paper work  
Sample labels missing or indecipherable  
Sample is expired or is soon to expire (the holding time is 6 months)

### **How much will this cost?**

The cost for gross alpha analysis is \$46.00. The cost for Uranium, if necessary, is \$14.00.

### **What is the process after I give my sample to the lab?**

After the lab gets the sample it will be approximately 2 weeks before results for gross alpha will be available. If the lab also performs the Uranium analysis results will be available in approximately 3 weeks.

When the results are complete and the report is prepared by the Nevada State Health Lab, it is sent to the NDEP for review and mailing to the homeowner. For Churchill County residents with gross alpha results, the NDEP will use this opportunity to open a conversation with the well owners to provide additional information and assistance.

### **What if I just want to have my water analyzed for Polonium-210?**

Please contact the Nevada Division of Environmental Protection for a list of appropriately-certified laboratories. Additional information will be available regarding analysis timeframes and costs.

### **What type of treatment is available to take gross alpha particles out of my drinking water?**

The US Environmental Protection Agency has identified reverse osmosis (RO) as the appropriate water treatment technology for small systems. Homeowners may want to contact water treatment vendors for additional information and system options. There are 17 listings in the AT&T yellow pages under Water Filtration & Purification Equipment. Several of these companies are full service water treatment providers. Homeowners can also find RO equipment at retail stores such as The Home Depot, Lowes, Sears and Western Nevada Supply.

If a water treatment vendor does not provide installation services, or if the equipment is purchased at a retail store, the homeowner may want to install the equipment or a local plumber can be contacted for installation.

The RO system will require continued maintenance according to manufacture's recommendations. Prior to purchasing and installing the RO system, the homeowner should do some additional water samples to determine if the water may require pretreatment for iron or manganese, as these may affect the operation of the RO system.

If larger volumes of water need to be treated, ion exchange technology may be another suitable option.

### **Where can I get more information about the health effects of Polonium-210?**

An additional resource for information has been established by the Nevada State Health Division at 775-684-2456 or 1-866-767-5038. These numbers will connect you to the Rocky Mountain Poison and Drug Center where medical staff are available to answer questions pertaining to Polonium-210.

The Nevada State Health Division also has an informational paper posted on their website at <http://health.nv.gov> . Follow the link under "Hot Topics" and click on "Churchill County Water Quality/Polonium-210"